



PROGRESS REPORT NO. 160

TO: Robert Tan, U.S. Environmental Protection Agency (EPA) – via Electronic mail
Kathryn Cerise, EPA – via Electronic mail

FROM: Kris McCaig, Teck American Incorporated (TAI)

Cc: Denise Mills, TAI – via Electronic mail
Rob Orr, TAI – via Electronic mail

DATE: November 6, 2019

FILE NO: 01-773180-000

RE: Upper Columbia River (UCR) Remedial Investigation/Feasibility Study
(RI/FS) - Progress Report No. 160 Month Ending October 2019

Pursuant to Paragraph 39 of the June 2, 2006 Settlement Agreement (Agreement), the following is intended to provide a summary of activities completed during the past month in compliance with the aforementioned Agreement. It is also intended to provide a brief summary of pending and on-going activities.

Soil Amendment Technology Evaluation Study (SATES) – TAI continued coordination with the SATES team and Kira Lynch, Superfund Technology Liaison with the Office of Research and Development, Office of Science and Policy during the month. The Ohio State University (OSU) laboratory continued the bench-scale testing of the selected soil amendments through October 2019. The bench tests are being conducted in accordance with the Final Phase II Bench-Scale Treatability Testing Work Plan (May 2019) and Addendum No. 1 (July 2019). OSU collected the first set of samples from the test pots on October 11, 2019, one month after starting the bench-scale testing (i.e., time point 1). As of this writing, TAI is awaiting analytical results for the baseline soil sample, the amendment samples, and the samples collected on October 11.

Baseline Ecological Risk Assessment:

Soil Toxicity Reference Values (TRVs) – TAI continued working on analyses for Steps 1 through 5 (“Characterize Site Metals Concentrations Relative to Both Eco-SSLs and Background Concentrations”), as outlined in the memorandum titled “Final Approach for Evaluating the Potential for Metals Toxicity to Plants and Invertebrates in the Baseline Ecological Risk Assessment (May 2019).”

Sediment and Porewater TRVs – Follow up actions continued during the month of October on items identified during the Sediment and Porewater TRV workshop TAI and EPA held in March 2019 to work through EPA’s comments on the October 2018 draft final TRV document.

Weight of evidence (WOE) – TAI submitted a letter to EPA on October 10, 2019 with two attachments; 1) a Draft Preliminary Weight of Evidence Framework Matrix for Benthic Macroinvertebrates (BMI), and 2) a presentation with walk-through of the BMI WOE Framework. This was prepared following the structure outlined in the April 8, 2019 memorandum titled, “Upper Columbia River – Proposed Weight of Evidence Framework Matrices”, and in response to the Memorandum TAI received from EPA on June 13, 2019.

Upland Soil Background Assessment – TAI and EPA participated on a call on October 31, 2019 to discuss the data filtering refinements that were applied by TAI in developing the Draft Final Technical Memorandum titled “Assessment of Background Concentrations of Metals and Metalloids in Upland Soils,” dated September 19, 2019. This included review of the resulting dataset and background threshold values presented in the draft final technical memorandum. As requested, TAI will provide supplemental Q-Q plots in early November to facilitate EPA’s review of the draft final memorandum.

Phase 3 Sediment Study Sediment Facies Mapping – TAI submitted the raw data for the entire facies mapping survey (including data acquired in 2018 and 2019) to EPA on an external hard drive on October 18, 2019. TAI continued preparation of the draft study data summary report and the draft technical memorandum with sediment composition and facies maps for the river reaches outside the Phase 3 areas of interest (AOIs). Both of these deliverables will integrate data acquired during the September-November 2018 and July 2019 field events.

2019 Phase 3 Sediment Study:

Toxicity Identification Evaluation (TIE) Pilot Study – TAI submitted the Draft TIE Pilot Study Report to EPA via electronic mail on September 13, 2019 for review and comment. The report included recommendations for additional testing to help refine the study plan for TIEs, if needed, for the Phase 3 Sediment Study. A call for TAI and EPA to discuss these recommendations is scheduled for November 13, 2019.

Porewater Extraction Method Study – TAI submitted a draft report titled “Draft Porewater Extraction Method Study – Stage 1,” to EPA via electronic mail on October 25, 2019. This report included recommendations for Stage 2 of the study and straw man recommendations for porewater collection during the Phase 3 bioassays to facilitate preparation for discussion of methods to include in a quality assurance project plan (QAPP) change request. These recommendations are subject to EPA approval. TAI notified EPA via email on October 31, 2019 that the repeat of the small peeper in

sediment test (Test 3-3) was started on October 30, 2019. Results for this test are expected in mid-November.

Field crews, with EPA oversight, conducted sediment and porewater sampling in Evans, China Bend, and Deadman's Eddy AOIs, and at reference locations in Canada during the month. Sampling at the reference locations in Canada was completed on October 4, sediment sampling in the AOIs was completed on October 18, and porewater sampling was completed on October 23, 2019. TAI notified EPA in a letter sent via email on October 24, 2019, that field sampling for the Phase 3 study was completed on October 23, 2019.

TAI received EPA's final split sample QAPP for sediment and porewater chemistry analyses on October 23, 2019.

TAI submitted comments on EPA's draft split bioassay QAPP via electronic mail on October 22, 2019.

Should you have any questions or require any additional information, please do not hesitate to contact me at 509-623-4501.